



North Carolina Office of the Chief Medical Examiner
Michelle Aurelius, MD
Chief Medical Examiner and Chair, NC CFPT

Office of the Chief Medical Examiner
NC Child Fatality Prevention Team Annual Summary
2019 Child Deaths in NC (ages 0-17 years)

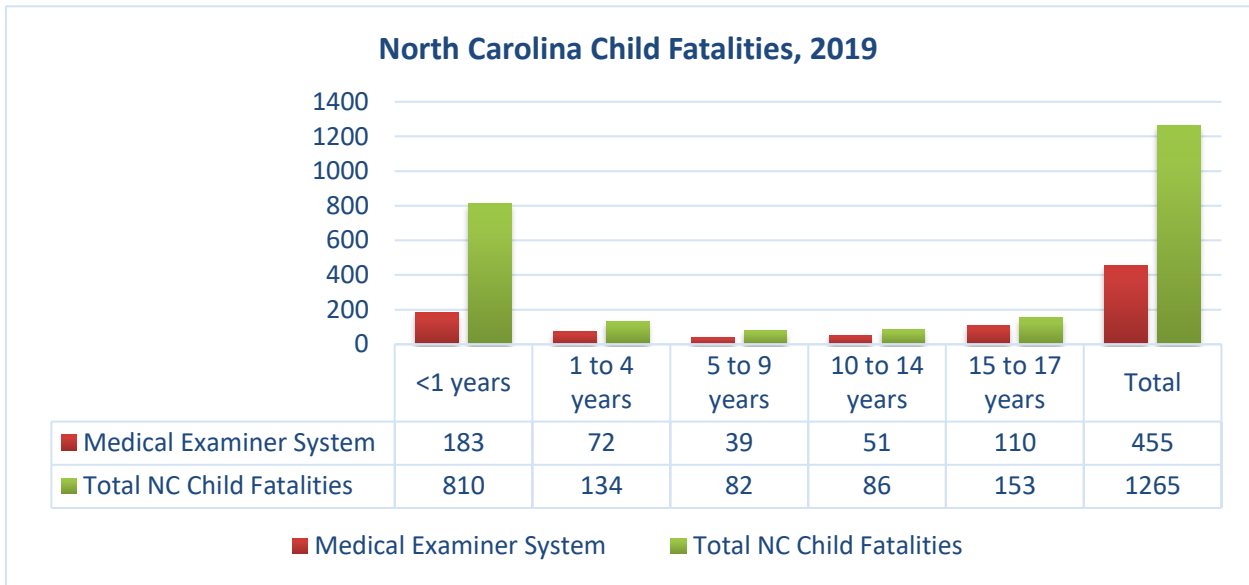
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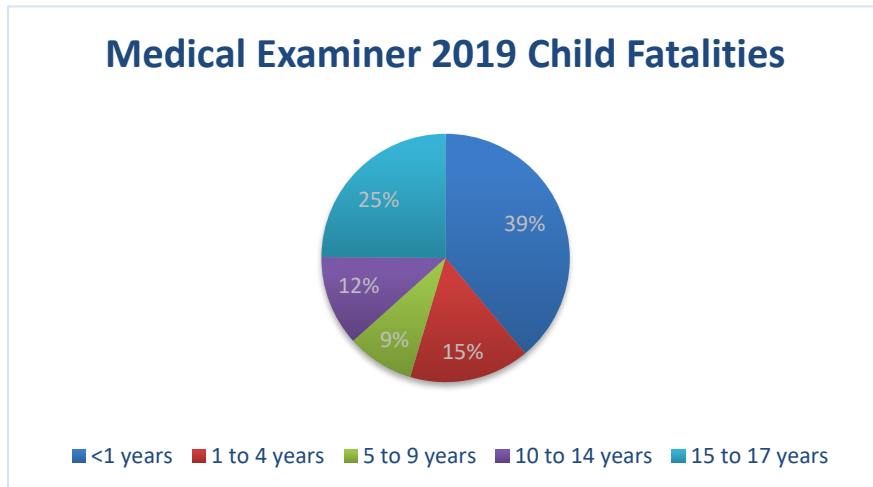
TOTAL NUMBER OF DEATHS 2019 North Carolina under the Age of 18 Years

Throughout the 2019 calendar year, the State Center for Health Statistics (SCHS) reported **1,265** children died in North Carolina. Each fatality is a tragedy regardless of death from a known natural disease/illness or unexpected. According to N.C. General Statutes § 130A-383, a medical examiner is notified to investigate the circumstances surrounding deaths due to violence, poisoning, accident, suicide, or homicide; occurring suddenly when the deceased had been in apparent good health or when unattended by a physician; or occurring under any suspicious, unusual or unnatural circumstance. The North Carolina Medical Examiner system investigated the cause and manner of death for 455 children in 2019.

The cases investigated by the Medical Examiner system included a number of natural deaths, as well as accident, homicide, suicide and deaths for which no cause and/or manner of death could be determined. The cases investigated by the Medical Examiner System are also assigned a means of death which refers to how the death occurred. Means included unknown, motor vehicle, natural, firearm, asphyxia, drowning, blunt, fire, toxicology, other, SIDS, fall/jump, animal, electrocution, exposure, medical treatment, environmental, falling object, and sharp.



Note: Total NC Death numbers retrieved from 2019 Child Death Fact Sheet
<https://schs.dph.ncdhhs.gov/data/vital/cd/2019/CFinNC2019.pdf>



The Child Fatality Prevention Team (CFPT) staff reviews child fatalities that are investigated by the Medical Examiner System. With a total of 1,265 North Carolina child deaths, approximately 34% of all child deaths that occurred in North Carolina were reviewed by the Medical Examiner CFPT. Represented below are child fatality reviews excluding pending cases, **21, which totals 434 children.** Due to pending cases, numbers are subject to change. Of note:

- Twelve fatalities occurred in NC to non NC resident children
- Three fatalities occurred outside of NC to non NC resident children-not represented among the breakout of child fatalities below
- Four fetal deaths noted in the Undetermined and Natural manners

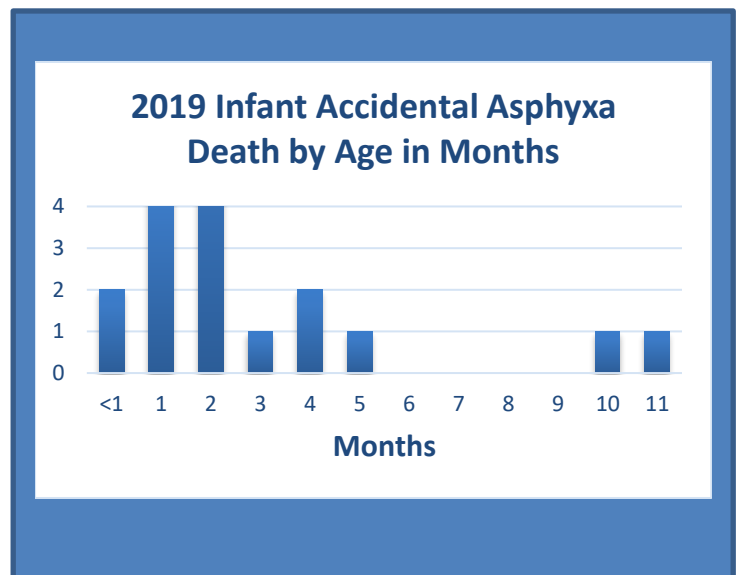
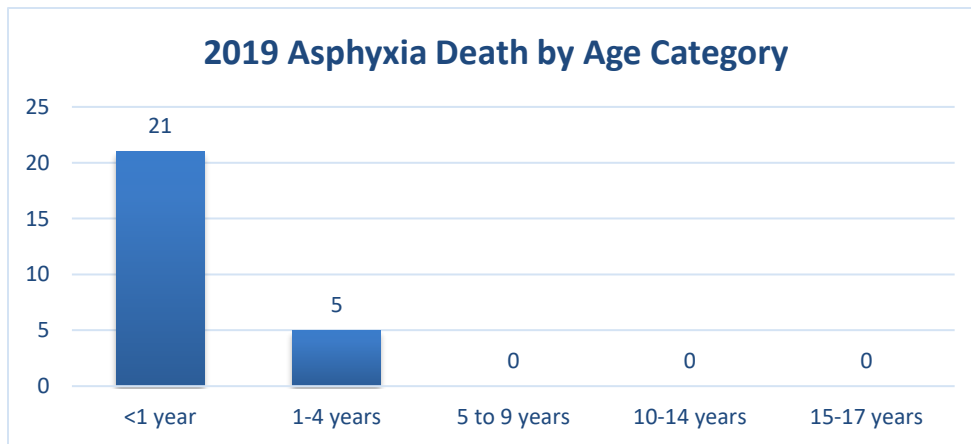
2019 OCME Child Fatalities		
Manner	Means	Number of Children
Accident (171)	Animals	1
	Asphyxia	26
	Blunt	4
	Drowning	31
	Exposure	2
	Fall	2
	Fire	8
	Firearm	3
	Motor Vehicle	82
	Toxin	8
Other	4	
Homicide (62)	Asphyxia	2
	Blunt	18
	Drowning	1
	Exposure	1
	Firearm	37
	Sharp	2
	Other	1
Natural (56)	Natural	50
	SIDS	4
	Unknown	2
Suicide (34)	Asphyxia	18
	Firearm	13
	Motor Vehicle	2
	Toxin	1
Undetermined (111)	Asphyxia	2
	Blunt	1
	Firearm	1
	Unknown	105
	Other	2
Pending		21

ACCIDENTS

Each year, accidental deaths comprise the largest number of non-natural deaths of children in North Carolina. In 2019, there were 171 deaths investigated by the NC Medical Examiner System certified as accident in manner. The CFPT utilizes multiple means based upon circumstances of these deaths.

Asphyxia

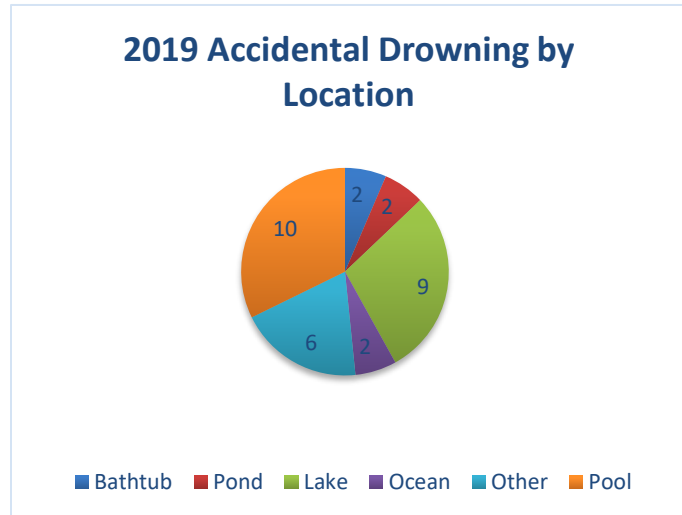
Accidental asphyxiation was the means of death for 26 children in 2019. Infants constituted the majority, 21, of the deaths with 20 of those fatalities due to accidental asphyxiation in a sleep environment—either during co-sleeping or by being placed in an unsafe sleep environment. Five accidental asphyxiation deaths of children between the ages of 1 and 4 years included 4 incidents of choking and one death related to mechanical asphyxiation.



Drowning

Drowning resulted in the deaths of 31 children in 2019. In terms of location, 10 drownings occurred in a pool, 2 in a bathtub, 9 in a lake, 2 in an ocean, 2 in ponds, and 6 in another non-standard locations. Of the 6 in ‘other’ location, 4 were related to vehicle accidents.

<i>Age Category</i>	<i>Number of Children</i>
<1 year	1
1-4 years	8
5-9 years	8
10-14 years	5
15-17 years	9



Vehicle-related

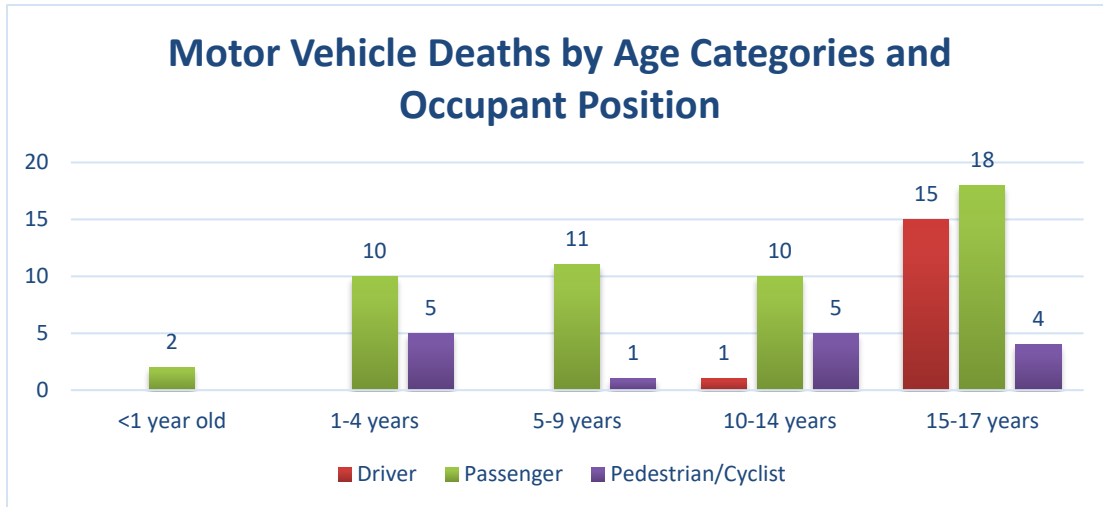
In 2019, there were 82 vehicle related deaths. Majority of these deaths, 51, were passengers, while 16 of were drivers, and 15 were outside of a vehicles/pedestrian.

Types of vehicles involved included 33 passenger cars, 13 SUV's, 8 pickup trucks, 4 vans, and 3 unknown. In addition to motor vehicles, other modes of transportation involved in collisions included 1 ATV's, 1 motorcycle, 1 golf cart, 1 jet ski, 2 motorbikes, and 3 bicycles. Other vehicles unknown or had multiple fatalities.

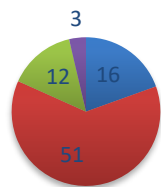
Influence of drug or alcohol contributed to 6 motor vehicle accidents. Five passengers were in vehicle driven by a driver under the influence of drugs or alcohol and 1 was a decedent as the cyclist struck by a driver under the influence of drugs or alcohol.

Among the 16 drivers, 8 were 17-years-old, 6 were 16-years-old, and 2 were 15-years-old or younger.

Of all the children involved in vehicle-related accidents, 22 children were either not wearing seat belts or were improperly restrained. Regarding seat restraint use, of the 16 drivers, 9 were properly restrained or were wearing a helmet; and of the 49 passengers, 17 were properly restrained. Of note, after a devastating motor vehicle accident, it is sometimes unable to be determined if the decedent was properly restrained at the time of the crash.



Motor Vehicle Deaths by Position



■ Driver ■ Passenger ■ Pedestrian ■ Bicyclist

Proper seatbelt use at time of accident

Driver 9
Passenger 17

Toxins

There were 8 deaths from toxic substances (i.e. poisoning). Five of these deaths were children 15-17 years old, 1 child was between 10 and 14 years, 1 child was between 1 and 4 years of age, and 1 child was under 1 year of age.

Fire

There were a total of 8 deaths from fires/burns/carbon monoxide. One child was under 1 year of age, one was between the age of 1 to 4 years, 3 children were between ages of 5 to 9 years, 1 between 10 to 14 years, and two between 15 to 17 years.

AGE CATEGORY OF CHILDREN	NUMBER OF CHILDREN
<1 YEAR	1
1-4 YEARS	1
5-9 YEARS	3
10-14 YEARS	1
15-17 YEARS	2

Fires/burns contributing to these deaths were 5 separate incidences, with some occurrences claiming multiple lives. Among these 5 incidences, 6 deaths occurred in a residence setting and 2 deaths in a vehicle. Sources of the residence fires ranged from candle, appliance, and other unknown sources.

Remaining means with an accidental manner, totaling 11 deaths, included

- One animal
- Two exposure
- Two fall/jump
- Three firearm
- Four blunt related trauma deaths
- Four other

Three of the four fatalities with the ‘Other’ means of death were related to unsafe sleep practices.

HOMICIDES

There were 62 children who died at the hands of another in 2019.

Once these deaths are given a manner and means of death, the CFPT staff designates a subcategories; homicides that occur at the hands of a parent or caregiver and homicides by other. These subcategories assist in identifying clear trends among the ages/manners.

Homicide by Parent or Caregiver

Homicide by Parent or Caretaker deaths accounted for 18 of the 61 total child homicides in 2019. Infants, children under 1 year of age, accounted for half, 9, of this subcategory. The remaining 9 deaths between the ages of 1-17 years:

- Six deaths among ages 1 to 4 years
- Two death among ages 5-9
- One death among ages 10-14

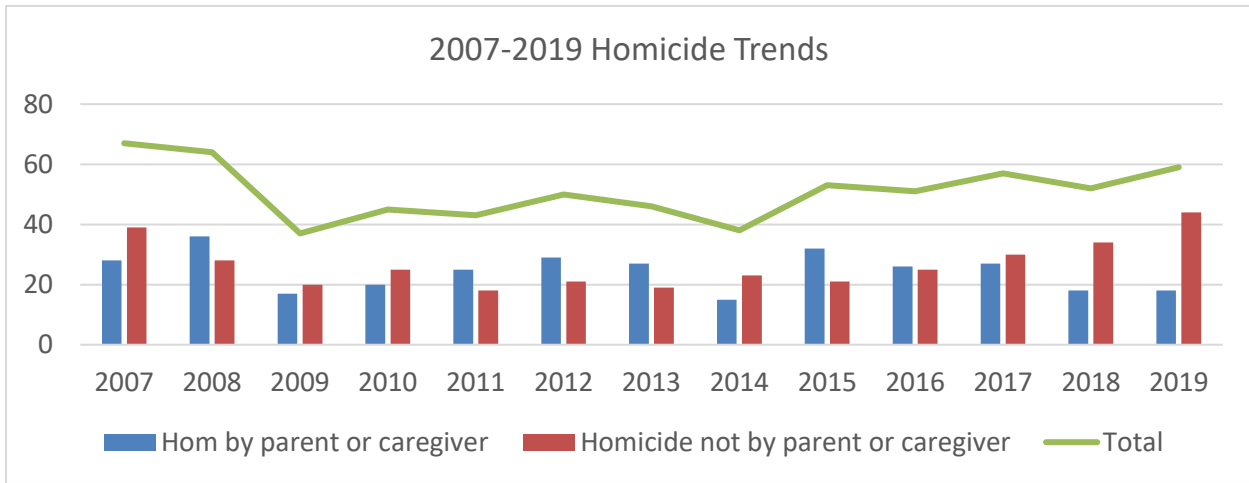
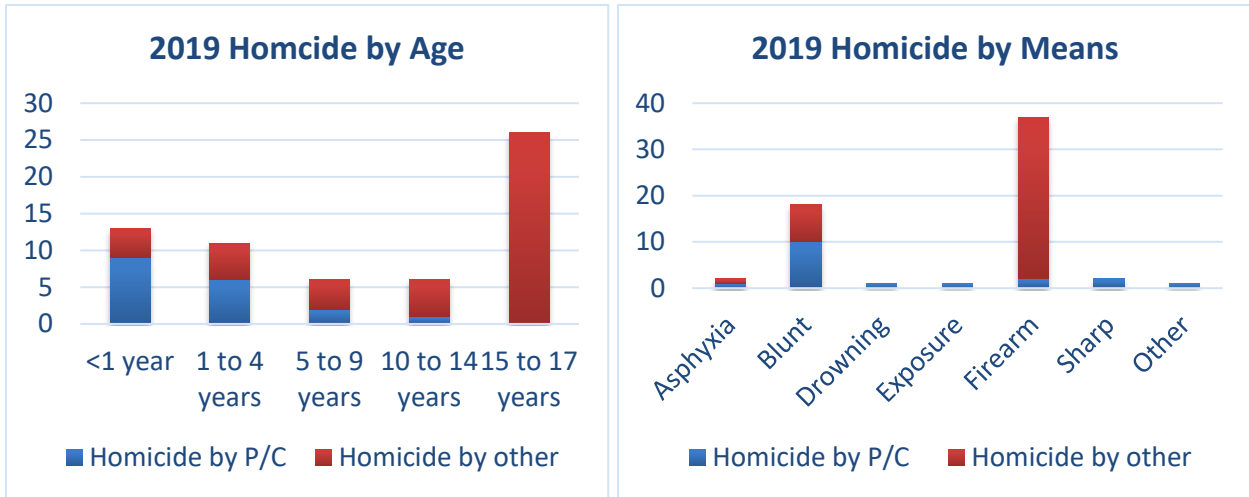
Regarding means, blunt force trauma was the assigned means for 10 deaths, 2 death occurred from use of a firearm, 2 deaths from a sharp object, and the following accounted for 1 death each: drowning, exposure, asphyxia, other.

Homicides by Other

Other homicides, the other subcategory in which the parent or caregiver was not a suspect or perpetrator, comprised 44 of the 61 total 2019 child homicides. Teenagers between the ages of 15 and 17 years accounted for 26 of the homicides. Under one year of age accounted for 4 deaths and ages 1 to 4 years for 5 deaths, ages 5 to 9 years for 4 deaths and 10 to 14

years for 5 deaths. Thirty-four of the 43 deaths (79%) not by parent or caregiver were due to firearms, 8 deaths due to blunt injury, and 1 death due to asphyxiation.

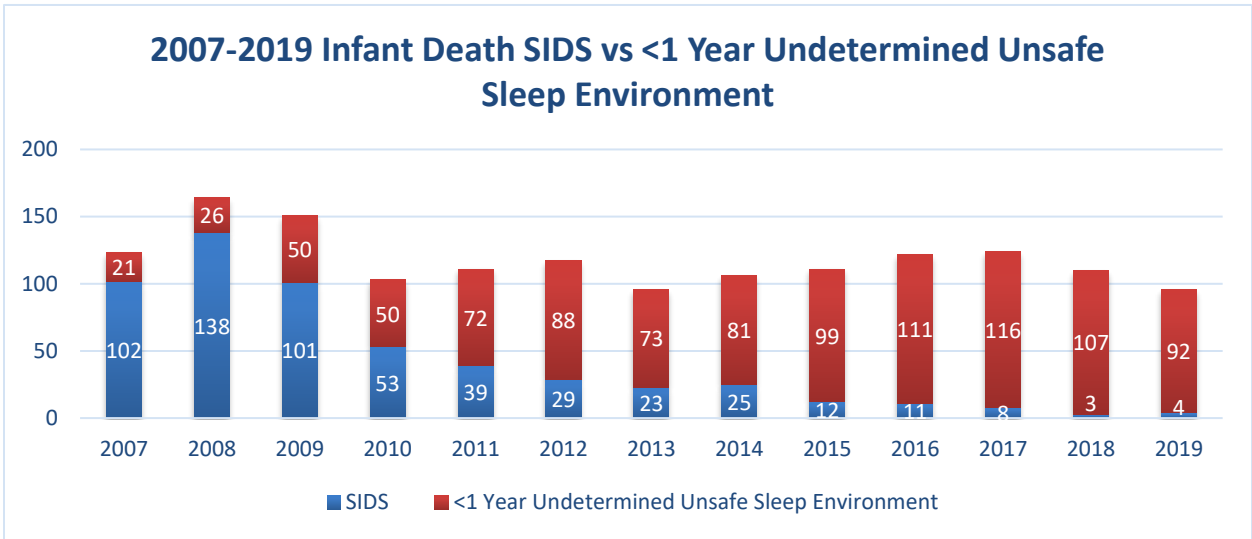
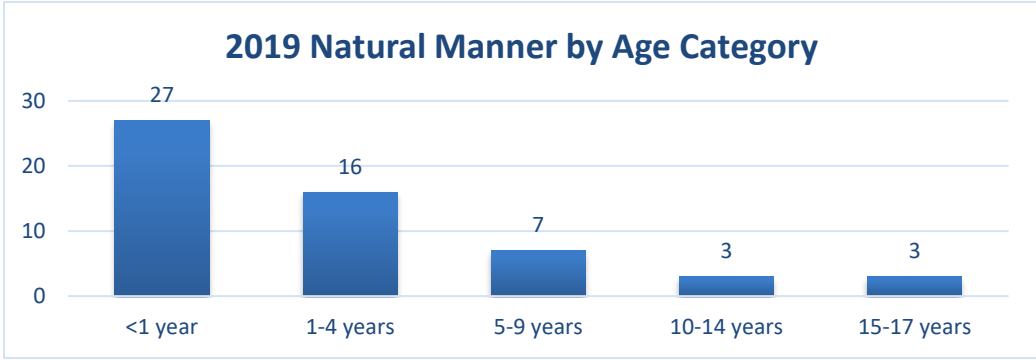
Of all the homicides, Black non-Hispanic children comprised the majority of homicides, 41 deaths; 9 deaths were of White non-Hispanic children, 7 identified as Hispanic, and 1 as American Indian.



NATURAL

Fifty-six deaths were determined to be natural in manner. Of these, 4 deaths were given a classification of Sudden Infant Death Syndrome (SIDS), and 52 deaths were other natural causes.

The top 5 means of death with a natural manner in 2019 were: myocarditis, congenital heart defect/disease, complications of pneumonia, asthma, and complications from other specified disease



Child fatalities previously classified with a Natural manner as Sudden Infant Death Syndrome (SIDS) have transitioned to be determined as Undetermined manner and means of death if the circumstances include potential unsafe sleep factors. The graph above demonstrates the transition from SIDS to Undetermined around 2012. Since then, the deaths determined to be Natural SIDS classifications have continued to decrease, however, deaths in the Undetermined manner have greatly increased. Additional information regarding these fatalities can be found below under the Infant Spotlight section.

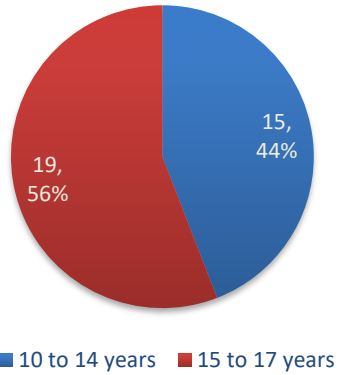
SUICIDES

Suicide was the manner of death of 34 children in 2019. Most of the deaths with a suicide manner were of children between the ages of 15 to 17 years, accounting for 19 deaths (56%). Additionally, there were 15 deaths with a suicide manner of children between the ages of 10 to 14 years.

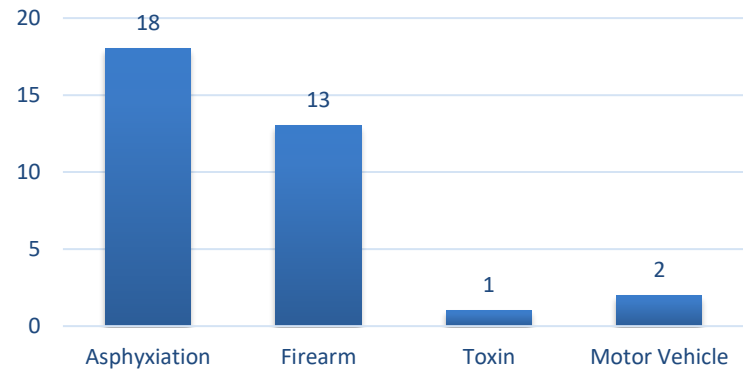
Males accounted for 25 deaths, females for 9 deaths.

The means of death in suicides included 18 deaths from an asphyxia event, 13 deaths from use of a firearm, 2 deaths due to motor vehicle crashes, 1 death from toxin.

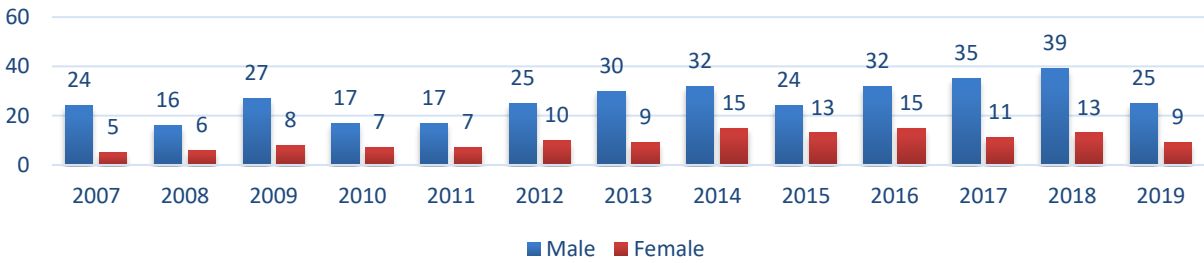
2019 Suicide by Age Category



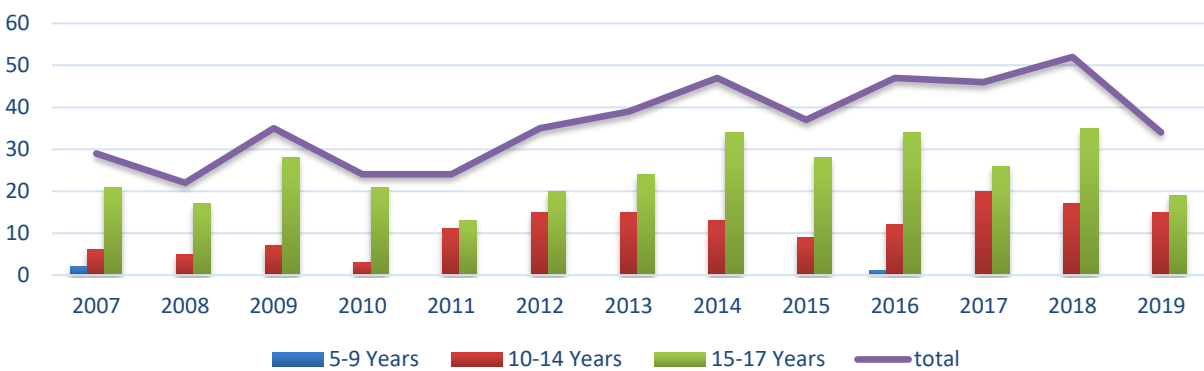
2019 Suicide by Means



2019 Suicide by Gender



Suicide by Age 2007-2019

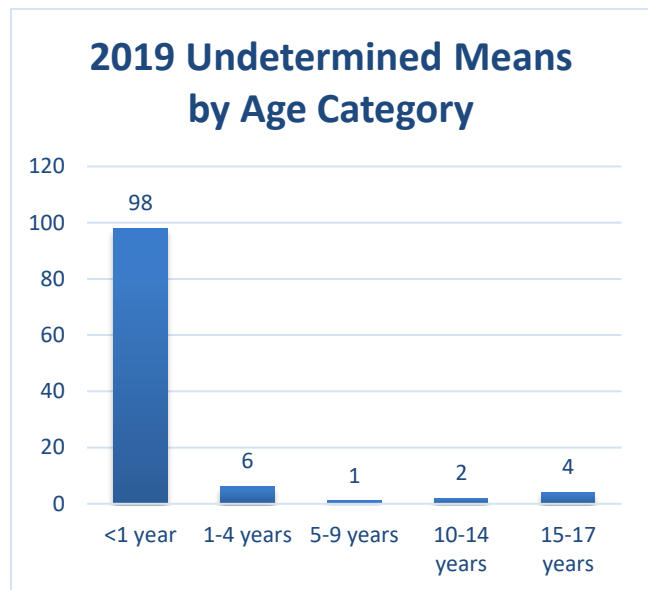
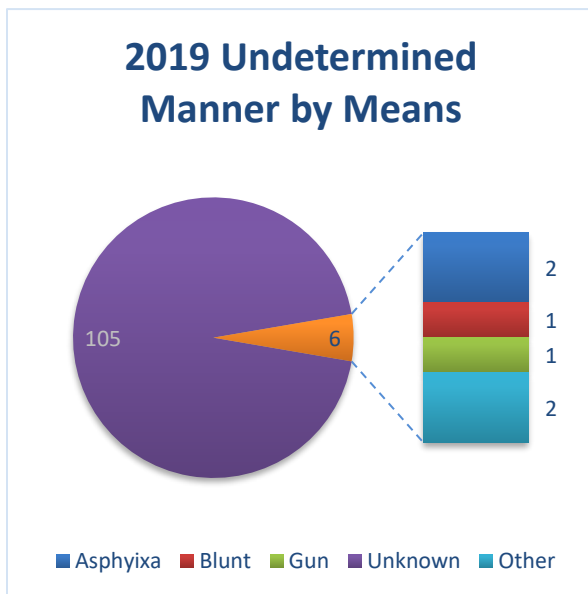


UNDETERMINED

There were 111 deaths that were certified as undetermined manner. Of those, 105 deaths were certified as unknown means, 2 deaths were certified as an asphyxiation, 1 death was related to blunt injuries, another to a firearm, and 2 deaths with of other means of death.

Of the undetermined manner, 98 children were under 1 year of age, 6 children were ages 1-4 years, 1 child was 5-9 years, 2 children were ages 10-14 years, and 4 children were age 15-17 years.

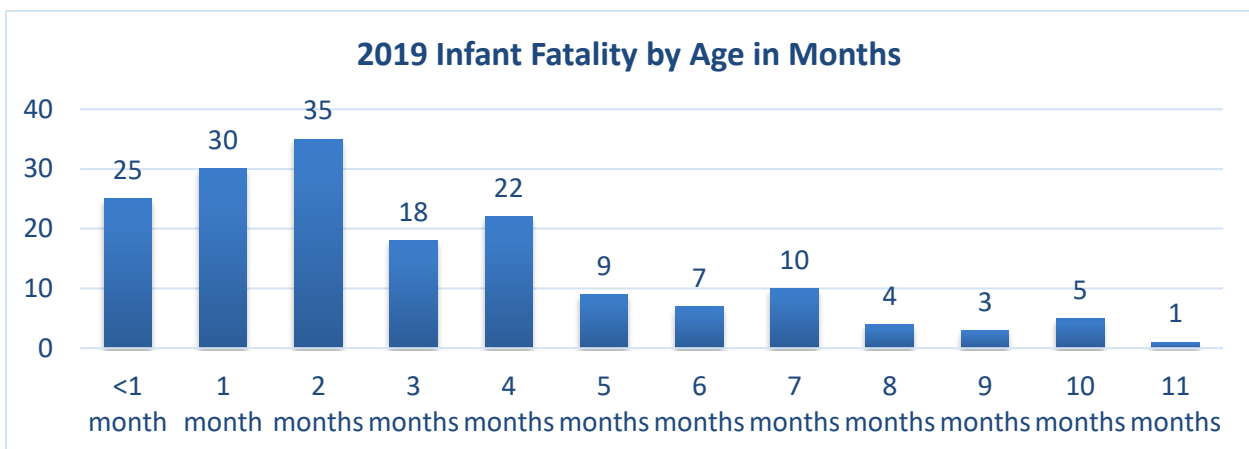
As is the case for most of the infants with an undetermined manner, when a known risky or potential unsafe sleeping situation is noted, the possibility of asphyxiation as a result of suffocation cannot be entirely excluded which leads to the certification of an unknown means of death.



SPOTLIGHT ON INFANT DEATH

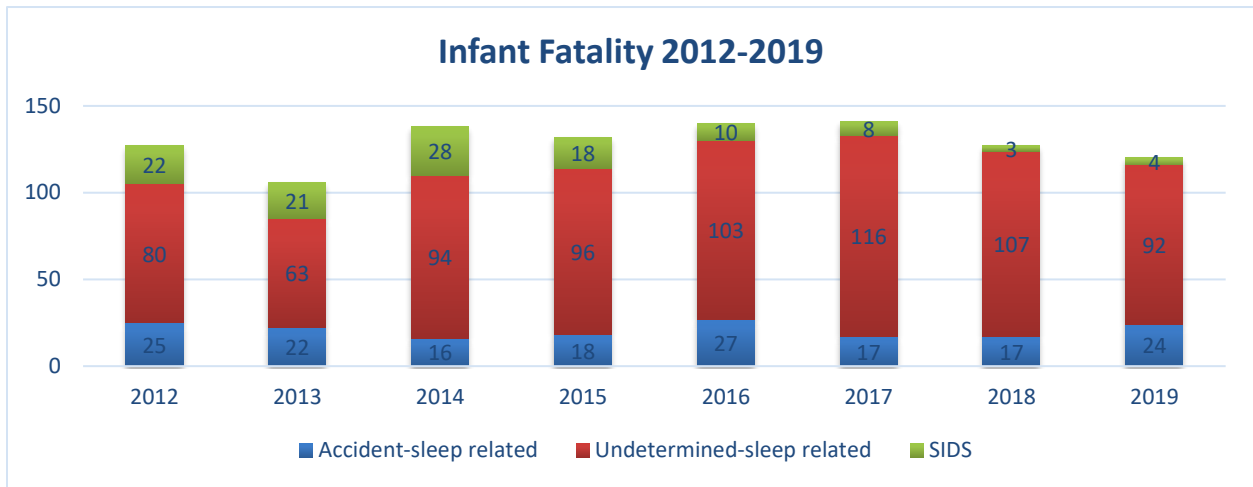
Infants are defined as children under 1 year of age. With a total of 183 infant deaths in 2019, below represents the breakdown by manner and means of the 169 finalized cases.

Manner	Means	Number of Children
Accident (31)	Animal	1
	Asphyxia	21
	Drowning	1
	Fire	1
	Firearm	1
	Motor Vehicle	2
	Toxin	1
	Other	3
Homicide (13)	Asphyxia	1
	Blunt	7
	Drowning	1
	Exposure	1
	Firearms	2
	Sharp	1
Natural (27)	Natural	23
	SIDS	4
Undetermined (98)	Unknown	96
	Other	2
Fetal		4
Pending		14



*Excluding Pending Cases

Infant Unsafe Sleep Fatalities



Total number of sleep related deaths in NC: 116

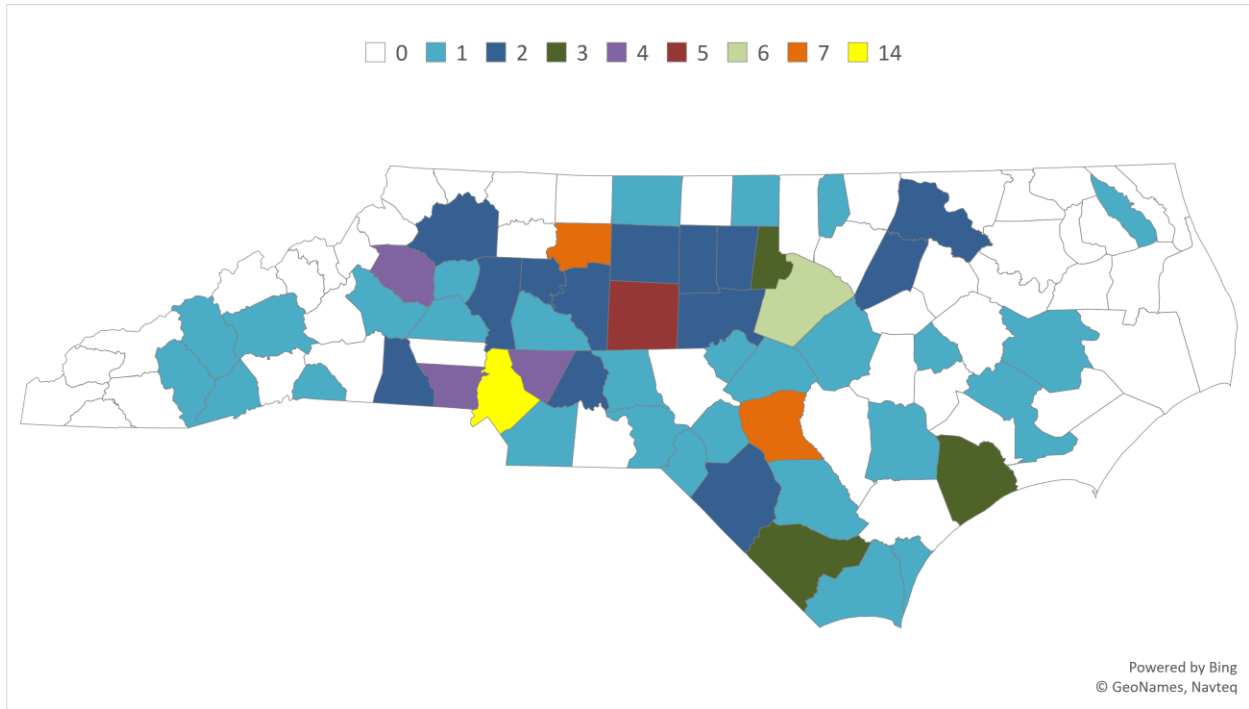
Among the infant accident sleep related deaths, 21 of the 24 deaths were in a co-sleeping environment.

Among the undetermined sleep related deaths, 60 of the 92 deaths were in a co-sleeping environment.

This makes for a total of 81 potential co-sleeping related fatalities. An additional 35 infants were in other unsafe sleep environments such as extra items in the crib, an unsafe sleep location (adult bed, on pillow(s), on couch, etc.).

	Accidental Asphyxiation	Undetermined Asphyxia and Unknown
Co-sleeping at time of death	21	60
Other potential unsafe sleep environment related	3	32
Total potential unsafe sleep environment deaths	24	92
	 116	

2019 Infant Unsafe Sleep Fatalities by Residence County



Number of Fatalities	Counties of Residence
1	Alexander, Beaufort, Bladen, Brunswick, Buncombe, Burke, Catawba, Craven, Duplin, Greene, Harnett, Haywood, Hoke, Jackson, Johnston, Lee, Montgomery, New Hanover, Pasquotank, Person, Polk, Richmond, Rockingham, Rowan, Sampson, Scotland, Transylvania, Union, Vance, Wilson
2	Alamance, Chatham, Cleveland, Davidson, Davie, Guilford, Halifax, Iredell, Nash, Orange, Robeson, Stanly, Wilkes
3	Columbus, Durham, Onslow
4	Cabarrus, Caldwell, Gaston
5	Randolph
6	Wake
7	Cumberland, Forsyth
14	Mecklenburg

*Not listed: counties with no infant unsafe sleep fatalities